Exam 01

A Library has decided to store information about its Stuff and Books in a database. It has chosen to hire you as a database designer.

1. **Prepare an E-R diagram and schema(mapping) for System that describes its activities according to The following Description:**

   - Library has a number of Employees , Each one Has Emp_Id(unique) , Name Which is represented as Fname and Lname, Email , Salary , DateOfBirth, Bouns , Address and Phone Number. Each Employee has a supervisor.

   - Library has a set of Floors each floor has floor number and Number of Blocks.

   - There is always one employee assigned to manage that Floor and each manager has a hiring Date.

   - Floor has many employees and employees work on Only One floor.

   - The data of the user will be Recorded by one employee , Each user has a set of attributes SSN(Unique) , Name , Email and Phones . And the Employee Can record More than one User.

   - The system records the following details about Book : id and Title.

   - The Employee has to record all required data each time the User Borrow a certain book with specified Date_Borrowed, Due_Date and Amount of money That paid for borrowing .

   - Each Book May have one or more authors , Each author May own one or more books.

- Each Book Has one Publisher , and each Publisher May publish many Books

- Data Recorded about author and publisher [id , Name].

- Each book is Classified under one Category. Each category may have many books, and each category has an id ,Cat_Name.

- Each book is assigned to a certain Shelf , and the shelf may contain one or more books . Shelf is defined by Code.

- Each Shelf is located on a specific floor , and the floor contains many shelfs.

—--